South Carolina
Public Service Commission

January 31, 2018

Topics we will cover today

- The Importance and Types of Procurement
- Procurement Methods
- Best Practices in Procurement
- Comparing Procurement Methods
- Auction Method Results
- Benefits

Procurement is Vitally Important

High Stakes

Individual transactions can easily exceed **$100M in spend** for utilities – getting the best price is crucial

High Risk

Balance complexities: regulatory, transactional, market timing, stakeholder perception, and opportunity cost

High Visibility

Multiple stakeholders including shareholders, legislative & regulatory bodies, and customer advocacy groups

Typical Utility Transaction Types

Utilities <u>provide natural gas</u> by:

- Owning upstream resources
  - e.g., wellhead, liquefaction
- Long-term gas supply contracts
  - e.g., 10-20 years, Elba LNG
- Short-term gas supply contracts/bilateral trades/options (< 5yrs)
  - Exchange (e.g., ICE)
  - 1-v-1 communication (e.g., email)
- Daily/spot natural gas purchases for uncovered volumes

Utilities <u>provide power</u> by:

- Owned Generation/asset acquisitions
- Long-term purchased power
  - Unit Specific
  - Portfolio
- Bilateral power contracts/ bilateral trades/options (< 5 years)
  - Exchange (e.g., ICE)
  - 1-v-1 communication (e.g., email)
- Day-ahead & spot purchases

Evolution of Procurement Methods

Sealed Bid

- One-time, private submittal of "best-&-final" bid in advance of deadline
- Bidders submit what they think will be accepted, not what they can afford

Multiple-Round, Descending Clock Auction

- Multiple rounds of sealed bids; price drops in each subsequent round
- Price is fixed; Volume is bid
- All bidders secure price at market point of *least-competitive* supplier

Live, Online, Reverse Auction

- Generates intense competitive bidding for each product against a hard-stop timeline
- Bidders can see each others' prices and continuously compete to win
- Achieves lowest possible prices

Pre-Internet Technology → **Used in RTO Capacity Procurement** → **State of the Art**

Symptoms of Imperfect Procurements

- ✖ Hardly any suppliers bidding
- ✖ Hard to evaluate / subjective / inconsistent
- ✖ Data Integrity Concerns
- ✖ High Cost to Administer
- ✖ Bidder Fatigue
- ✖ Irregularities, Unwarranted Perceptions
- ✖ No or few opportunities for competition to drive to best price

Characteristics of Optimized Procurements

- ✓ Easy to Bid
- ✓ Instantaneous bidding
- ✓ Easy to Evaluate & Decide

Efficient

- ✓ Transparency and reporting
- ✓ Highly Auditable

Document Scrutiny

- ✓ Able to see best price so far, & reduce further and further
- ✓ Highly Secure and Strong Data Integrity

Price Discovery

- ✓ More Competitors

Intense Competition & Outlier Bids

Yield Positive Outcomes

Lower Ratepayer Cost

- Transacting & executing quickly yields lower premiums.
- Focused supplier attention in a 10-minute bidding session increases liquidity & competition
- Maximum competition using interactive bidding

Increase Transparency

- Bidders see current low bid and can rebid to pull ahead, win business.
- Utilities watch the bidding unfold live and monitor bidding activity

Deliver Immediate Documentation of Auction Results

- Fully auditable, with immediate access to auction process & outcomes. Commissions & staff, & internal utility teams, can review for fairness and compliance.

Comparing Benefits of Evolving Procurement Methods

	Price Discovery	Speed / Efficiency	Bid Improvement	Best Price for Ratepayer
Sealed Bid	✗	✗	One Bid Only	Good
Descending Clock Auction	✓	✗	✓✓	Better
On-line, Live Reverse Auction	✓✓✓	✓✓✓	✓✓✓	Best

Live Reverse Auctions Drive Competition

High number of bidders and constant price discovery reduces costs to ratepayers

Auction Information

Auction Start Time:	4/19/2017 11:10:00 AM EPT	RFP Status:	Closed; Awarded
Auction End Time:	4/19/2017 11:20:00 AM EPT	Time Left:	Auction Ended
Total Quantity:	500,000 MMBtu/day	Total Bid:	33 Unique Bidders: 13
Opening Bid ($/MMBtu):	0.05000	Low Bid ($/MMBtu):	0.02500
Reserve Price ($/MMBtu):	N/A	Low Bidder:	Bidder A
Reserve Status:	N/A		

Price Graph

Live Reverse Auctions Drive Competition

With last bid blind, winning bidder outbids themselves 20% of the time as the lowest bid

6 – Final Bid

5 & 6 – Last Bid Blind

4 – “midway” bid

2 & 3 – testing waters; improves own bid

1 – Opening Bid

Bid History

Company Name	Bid Amount	Bid Quantity	Date and Time of Bid
Bidder A	($0.01250)	10,000	4/19/2017 10:59:44
Bidder A	($0.01000)	5,000	4/19/2017 10:59:32
Bidder B	($0.00500)	5,000	4/19/2017 10:59:10
Bidder A	($0.00250)	10,000	4/19/2017 10:56:17
Bidder C	$0.00000	30,000	4/19/2017 10:52:57
Bidder D	$0.00000	10,000	4/19/2017 10:57:27
Bidder B	$0.00000	10,000	4/19/2017 10:55:54
Bidder A	$0.00500	10,000	4/19/2017 10:55:49
Bidder E	$0.00850	10,000	4/19/2017 10:54:04
Bidder F	$0.01000	20,000	4/19/2017 10:55:31
Bidder D	$0.01000	10,000	4/19/2017 10:57:04
Bidder E	$0.01100	20,000	4/19/2017 10:53:24
Bidder A	$0.01250	10,000	4/19/2017 10:55:14
Bidder A	$0.02000	10,000	4/19/2017 10:54:31
Bidder G	$0.02000	10,000	4/19/2017 10:54:34
Bidder F	$0.03000	20,000	4/19/2017 10:52:37
Bidder E	$0.03000	20,000	4/19/2017 10:51:33
Bidder D	$0.03000	10,000	4/19/2017 10:51:53
Bidder A	$0.03000	10,000	4/19/2017 10:53:33
Bidder H	$0.03000	5,000	4/19/2017 10:56:21

And Competition Means Large Ratepayer Savings

Final bids are below utility's "transactable" price, leading to ~$500,000 in savings in this example

	1. 7x24 ATC Q1 '18	2. 7x24 ATC 2H '18	3. 5x16 On-Peak Cal 2018	4 7x24 ATC Cal 2018
Customer Target ($/MWh)	$40.00	$32.03	$39.60	$33.81
Final Price ($/MWh)	$38.45	$29.50	$37.59	$31.10
$/MWH Difference	$1.55	$2.53	$2.01	$2.71
MWh's Procured	21,600	44,160	40,800	87,600
Potential Cost Avoidance	**$33,480**	**$111,725**	**$82,008**	**$237,396**

Extensive World Bank Study on Procurement Methods

- "Most of the energy auctions carried out as part of the first generation of power sector reforms have been designed as sealed-bid auctions…**A clock auction enables an efficient price discovery, and is conducive to more aggressive behavior among bidders …resulting in lower prices**."
- The World Bank studied the results of a Florida utility that used the anglo-dutch auction design:

  "The practical usefulness of the auctions is best summarized by an official of the municipal utility who, after the first-time use of the auction to procure an electricity forward contract, observed that, '**the auction resulted in a savings of about 10 percent**, compared with what the muni[cipal utility] normally pays … the process worked tremendously for us. I see this as something that is going to catch on …. It's very good for competition. It's unmasking the prices and will save us between $500,000 and $1 million annually."

Source: http://documents.worldbank.org/curated/en/114141468265789259/pdf/638750PUB0Exto00Box0361531B0PUBLIC0.pdf

Benefits of Modernizing Procurement

Transparency

- Drives competition and ensures competitive & prudent rates, with optimal procurement outcomes.
- Contributes heavily to lesser-informed stakeholders' understanding markets and products

Robust competition

- Ensures best market price
- Contributes to keeping utility operating costs and risks low

Strong auction models reinforce markets' growth and new products being developed

- Contributes to utility's ability to optimize portfolio and manage risk in rapidly evolving landscape

Preferred auction engagement

- Has no-risk model , with no transaction being forced, to minimize utility risk and cost
- Integrates to optimize the "bid-getting" piece of utility's procurement process
- Start with open price discovery, and end with best and final "sealed bid" offer

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